

# ABSTRACT OF THE DISCLOSURE

The invention provides a system and methods for manufacturing an optical member, such as a color filter, using a scanning ink-jet head, where all nozzles of the ink-jet head precisely scan formation regions of pixels. In accordance with the invention, the accuracy of discharge position of ink from each nozzle is increased, the utilization of the nozzle (printing efficiency) is heightened, variations in color from pixel to pixel are controlled, and optical characteristics of an optical member is thus made uniform in plan view. In the method for manufacturing a color filter, a plurality ink-jet heads 22, each head having a plurality of nozzles 27, performs a main scan and a sub scan. Further, in accordance with the invention, if  $W$  represent the spacing between two closest nozzles at the closest ends of the two adjacent ink-jet heads 22 with one nozzle in one head 22 and the other nozzle in the other head 22, and  $D$  represent a constant layout pitch  $D$  of the nozzles 27, then the following equation holds:

$$W=mD \text{ (m is an integer of 2 or larger).}$$

Additionally, if  $P$  represent a sub scanning motion pitch of the head 22, then the following equation holds:

$$P=nD \text{ (n is an integer of 1 or larger).}$$